

Remarks:

This application has been reviewed carefully in view of the Office Action mailed September 22, 2005 ("the Office Action"). In the Office Action, claims 1-20 were rejected
5 under 35 U.S.C. § 102(b), as allegedly anticipated by Langford, III, U.S. Patent No. 5,106,035.

The above-described rejection is addressed as follows:

10 **I. CLAIM REJECTIONS**

As noted above, claims 1-20 were rejected under 35 U.S.C. § 102(b), as allegedly anticipated by the patent to Langford, III.

15 "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." See, M.P.E.P. § 706.02, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

20 The Office Action asserts that "Langford does not disclose the level of reaction pressure to be regulated by the controller; however, while features of an apparatus may be recited either structurally or functionally, claims directed [at] an apparatus must be distinguished from the prior art in terms of structure rather than function. ... A claim containing a recitation with respect to the manner in which a claimed apparatus is intended
25 to be employed does not [differentiate] the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim." See, Office Action, page 3, 1st paragraph.

30 The amendment to claim 1 clarifies that the controller is configured to regulate the reaction pressure to less than one atmosphere. This is a limitation on the hardware / software of the controller and not a functional limitation.

Applicants respectfully traverse the examiner's assertion that Langford, III does not recite the level of reaction pressure. Rather, Langford, III recites "Gaseous hydrogen at approximately 20° F is injected into the fuel cell at approximately **50 psi**. Oxidizer is also injected at similar conditions" (col. 4, lines 13-16, emphasis added). Langford, III further recites that "The fuel cell requires a gaseous oxidizer at a pressure **far above ambient**" (col. 5, lines 47-48, emphasis added). Lastly, Langford, III does not disclose a reaction pressure being regulated to be less than one atmosphere with the aircraft at a cruise altitude, as is claimed in the current invention. A person skilled in the art would find all of these statements consistent with present-day technology, in which reaction pressures are well over one atmosphere and would have no reason to read in an unstated disclosure of a controller configured to regulate the reaction pressure to be less than one atmosphere.

Claim 1, as amended, recites:

... a controller configured to regulate the reaction pressure of a reactant of the group consisting of the fuel and the oxidizer;
wherein the controller is **configured to regulate the reaction pressure to be less than one atmosphere** with the aircraft at a cruise altitude and the fuel cell operating at the given power-generation rate.

Likewise, claim 17 recites:


... such that the fuel cell reacts oxygen at a first reaction pressure with hydrogen at a second reaction pressure, **wherein the first reaction pressure is less than one atmosphere**, and wherein the difference between the first reaction pressure and the second reaction pressure is no greater than a predetermined limit.

Because Langford, III recites that both the hydrogen and oxidizer being injected into the fuel cell at approximately 50 psi, and because Langford, III fails to disclose either reactant having a reaction pressure of less than one atmosphere, the rejection under 35 U.S.C. § 102(b) of claims 1 and 17, and their dependent claims 2-16 and 18-20 respectively, is improper, and Applicants request it be withdrawn.

In view of the foregoing, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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